

Lc743	M N F N V S L M E K L K W K I K C I E N	20
RM8con	. . . . .
1	- - - - - + - - - - - + - - - - - + - - - - - +	60
Lc743	ATGAATTTCACGCTTACTTTGATGGAGAAATTAATAATGGAAGATTAAATGCATTGAAAAAT	
RM8A	.....Lc743/5'.....	
RM8B	.....
RM8C	.....
RM8con	.....
Lc743	K F L N Y R L T T N E T V V A E T E Y G	40
RM8con	.....
61	- - - - - + - - - - - + - - - - - + - - - - - +	120
Lc743	AAGTTTTTAAACTATCGTTTAACTACCAATGAAACGGTGGTAGCTGAAACTGAATATGGC	
RM8A	.....
RM8B	.....
RM8C	.....
RM8con	.....
Lc743	K V K G V K R L T V Y D D S Y Y S F E G	60
RM8con	.....
121	- - - - - + - - - - - + - - - - - + - - - - - +	180
Lc743	AAAGTGAAAGCGGTAAACGTTTAACTGTGTACGATGATTCCTACTACAGTTTTCAGGGT	
RM8A	.....
RM8B	.....
RM8C	.....
RM8con	.....
Lc743	I P Y A Q P P V G E L R F K A P Q R P T	80
RM8con	.....
181	- - - - - + - - - - - + - - - - - + - - - - - +	240
Lc743	ATACCGTACGCCCAACCGCCAGTGGGTGACGATTAAAGCACCCCAGCGACCAACA	
RM8A	.....
RM8B	.....
RM8C	.....
RM8con	.....
Lc743	P W D G V R D C C N H K D K S V Q V D F	100
RM8con	.....
241	- - - - - + - - - - - + - - - - - + - - - - - +	300
Lc743	CCCTGGGATGGTGTGGCGTATTGTTGCAATCATAAAGATAAGTCAGTGCAAGTTGATTTT	
RM8A	
RM8BC.....	
RM8C	
RM8con	

FIGURE 1

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Lc743      I T G K V C G S E D C L Y L S V Y T N N 120
RM8con     . . . . .
301 -----+-----+-----+-----+-----+-----+-----+-----+ 360
Lc743      ATAACGGGCAAAGTGTGTGCTCAGAGATTGTCTATACCTAAGTGTCTATACGAATAAT
RM8A       . . . . .
RM8B       . . . . .
RM8C       . . . . .
RM8con     . . . . .

Lc743      L N P E T K R P V L V Y I H G G G F I I 140
RM8con     . . . . .
361 -----+-----+-----+-----+-----+-----+-----+-----+ 420
Lc743      CTAAATCCCGAAACTAAACGTCCCGTTTTAGTATACATACATGGTGGTGGTTTTATTATC
RM8A       . . . . .
RM8B       . . . . .
RM8C       . . . . .
RM8con     . . . . .

Lc743      G E N H R D M Y G P D Y F I K K D V V L 160
RM8con     . . . . .
421 -----+-----+-----+-----+-----+-----+-----+-----+ 480
Lc743      GGTGAAAATCATCGTGATGTATGGTCTGATTATTTCATTA AAAAGGATGTGGTGTG
RM8A       . . . . .
RM8B       . . . . .
RM8C       . . . . .
RM8con     . . . . .

Lc743      I N I Q Y R L G A L G F L S L N S E D L 180
RM8con     . . . . .
481 -----+-----+-----+-----+-----+-----+-----+-----+ 540
Lc743      ATTAACATACAATATCGTTGGGAGCTCTAGGTTTTCTAAGTTTAAATTGAGAAGACCTT
RM8A       . . . . .
RM8B       . . . . .
RM8C       . . . . .
RM8con     . . . . .

Lc743      N V P G N A G L K D Q V M A L R W I K N 200
RM8con     . . . . .
541 -----+-----+-----+-----+-----+-----+-----+-----+ 600
Lc743      AATGTGCCCCGTAATGCCGGCCTTAAAGATCAAGTCATGGCCTTGGCTTGGATTAAAAAT
RM8A       . . . . .
RM8B       . . . . .
RM8C       . . . . .
RM8con     . . . . .

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Figure 1 continued

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Lc743 N C A N F G G N P D N I T V F G E S A G 220
 RM8con
 601 +-----+-----+-----+-----+ 660
 Lc743 AATTGCGCCAACCTTTGGTGGCAATCCCGATAATATTACAGTCTTTGGTGAAAGTGCCGGT
 RM8A
 RM8B
 RM8C
 RM8con

Lc743 A A S T H Y M M L T E Q T R G L F H R G 240
 RM8con
 661 +-----+-----+-----+-----+ 720
 Lc743 GCTGCGCTTACCCACTACATGATGTTAACC GAACAACTCGCGGTCTTTCCATCGTGGT
 RM8A
 RM8B
 RM8C
 RM8con

Lc743 I L M S G N A I C P W A N T Q C Q H R A 260
 RM8con L
 721 +-----+-----+-----+-----+ 780
 Lc743 ATACTAATGTCGGGTAATGCTATTTGTCCATGGGCTAATACCCAATGTCAACATCGTGCC
 RM8AT.
 RM8BT.
 RM8CT.
 RM8conT.

Lc743 F T L A K L A G Y K G E D N D K D V L E 280
 RM8con
 781 +-----+-----+-----+-----+ 840
 Lc743 TTCACCTTAGCCAAATTTGGCCGGCTATAAGGGTGAGGATAATGATAGGATGTTTTGGAA
 RM8A
 RM8B
 RM8CA.
 RM8con

Lc743 F L M K A K P Q D L I K L E E K V L T L 300
 RM8con
 841 +-----+-----+-----+-----+ 900
 Lc743 TTCTTATGAAAGCCAAGCCACAGGATTAAATAAACTTGAGGAAAAAGTTTAACTCTA
 RM8A
 RM8B
 RM8CG.
 RM8con

Figure 1 continued

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Lc743 E E R T N K V M F P F G P T V E P Y Q T 320
 RM8con
 901 -----+-----+-----+-----+ 960
 Lc743 GAAGAGCGGTACAAATAAGGTCATGTTTCCTTTTGGTCCCACTGTTGAGCCATATCAGACC
 RM8A
 RM8B
 RM8C
 RM8con

Lc743 A D C V L P K H P R E M V K T A W G N S 340
 RM8con
 961 -----+-----+-----+-----+1020
 Lc743 GCTGATTGTGCTTTACCCAAACATCCTCGGGAAATGGTTAAAACTGCTTGGGGTAATTGG
 RM8A
 RM8B
 RM8C
 RM8con

Lc743 I P T M M G N T S Y E G L F F T S I L K 360
 RM8con
 1021 -----+-----+-----+-----+1080
 Lc743 ATACCCACTATGATGGGTAACACTTCATATGAGGGTCTATTTTCACTTCAATTCTTAAG
 RM8A
 RM8B
 RM8C
 RM8con

Lc743 Q M P M L V K E L E T C V N F V P S E L 380
 RM8con
 1081 -----+-----+-----+-----+1140
 Lc743 CAAATGCCTATGCTTGTAAAGGAATTGGAACTTGTGTCAATTTTGTGCCAAGTGAATTG
 RM8A
 RM8B
 RM8C
 RM8con

Lc743 A D A E R T A P E T L E M G A K I K K A 400
 RM8con
 1141 -----+-----+-----+-----+1200
 Lc743 GCTGATGCTGAACGCACCGCCCGAGAGACCTTGGAAATGGGTGCTAAAATTAAGGCT
 RM8A
 RM8B
 RM8C
 RM8con

Figure 1 continued

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$$\begin{aligned} \mathcal{E}^{(1)}_{\text{eff}} &= \frac{1}{2} \sum_{\mathbf{k}} \left(\frac{1}{2} \left(\frac{1}{\epsilon_0} + \frac{1}{\epsilon_0} \right) \right) \mathbf{k} \cdot \mathbf{k} = \frac{1}{2} \sum_{\mathbf{k}} \left(\frac{1}{\epsilon_0} + \frac{1}{\epsilon_0} \right) \mathbf{k} \cdot \mathbf{k} \\ &= \frac{1}{2} \sum_{\mathbf{k}} \left(\frac{1}{\epsilon_0} + \frac{1}{\epsilon_0} \right) \mathbf{k} \cdot \mathbf{k} = \frac{1}{2} \sum_{\mathbf{k}} \left(\frac{1}{\epsilon_0} + \frac{1}{\epsilon_0} \right) \mathbf{k} \cdot \mathbf{k} \end{aligned}$$

Lc743 N Q L A K R M P K E S R E Y K T I E R M 500
 RM8con
 1441+1500
 Lc743 AATCAATTGCCAAACGATGCCTAAAGAAATCGCGTGAATACAAAACAAITGAACGTATG
 RM8A
 RM8B
 RM8C
 RM8con

Figure 1 continued

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Lc743 T G I W I Q F A T T G N P Y S N E I E G 520
 RM8con
 1501 -----+-----+-----+-----+-----+1560
 Lc743 ACTGGTATATGGATACAATTGGCCAGCACTGGTAATCCTTATAGCAATGAAATTGAAGGT
 RM8A
 RM8B
 RM8C
 RM8con

Lc743 M E N V S W D P I K K S D E V Y K C L N 540
 RM8con
 1561 -----+-----+-----+-----+-----+1620
 Lc743 ATGGAAAATGTTTCCTGGGATCCAATTAAGAAATCCGACGAAGTATACAAGTGTITGAAT
 RM8AT.
 RM8BT.
 RM8CT.
 RM8conT.

Lc743 I S D E L K M I D V P E M D K I K Q W E 560
 RM8con
 1621 -----+-----+-----+-----+-----+1680
 Lc743 ATTAGTGACGAATTGAAAATGATTGATGTGCCTGAAATGGATAAGATTAAACAATGGGAA
 RM8AT.G
 RM8BT.G
 RM8CT.G
 RM8conT.G

Lc743 S M F E K H R D L F * 570
 RM8con
 1681 -----+-----+-----+-----+-----+1713
 Lc743 TCGATGTTTGAAAAACATAGAGATTATTTAG
 RM8ALc743/3'
 RM8B
 RM8C
 RM8con

Figure 1 continued

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Figure 2.

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Figure 3.

ATGACTTTTCTGAAGCAATTCATATTTGCGCTGAAACTATGCTTTAAATGCATGGTCAAT
1 -----+-----+-----+-----+-----+-----+ 60
TACTGAAAAGACTTCGTTAAGTATAAAGCGGACTTTGATACGAAATTTACGTACCGATT
M T F L K Q F I F R L K L C F K C M V N -
AAATACACAAACTACCGTCTGAGTACAAATGAAACCCAAATAATCGATACTGAATATGGA
61 -----+-----+-----+-----+-----+-----+ 120
TTTATGTGTTTATGGCAGACTCATGTTTACTTTGGGTTTATTAGCTATGACTTATACCT
K Y T N Y R L S T N E T Q I I D T E Y G -
CAAATTAAGGGTGTAAAGCGAATGACCGTCTACGATGATTCTTACTACAGTTTCGAGAGT
121 -----+-----+-----+-----+-----+-----+ 180
GTTTAATTCGCCAATTTCGTTACTGGCAGATGCTACTAAGAATGATGTCAAAGCTCTCA
Q I K G V K R M T V Y D D S Y Y S F E S -
ATACCCTATGCTAAGCCTCCAGTGGGTGAGTTGAGATTCAAGGCACCCACGGCGCTGTA
181 -----+-----+-----+-----+-----+-----+ 240
TATGGGATACGATTCCGAGGTCACCCACTCAACTCTAAGTTCCGTGGGTGCGCGGACAT
I P Y A K P P V G E L R F K A P Q R P V -
CCATGGGAGGGTGTACGTGATTGCTGTGGGCCAGCCAACAGATCGGTACAGACAGATTTT
241 -----+-----+-----+-----+-----+-----+ 300
GGTACCCTCCACATGCACCTAACGACACCGGTGGTGTCTAGCCATGCTGTCTAAAG
P W E G V R D C C G P A N R S V Q T D F -
ATAAGTGGCAAACCCACAGGTTCCGAGGATTGTCTATACCTGAATGTGTATACCAATGAC
301 -----+-----+-----+-----+-----+-----+ 360
TATTCACCGTTTGGGTGTCCAAGCCTCCTAACAGATATGGACTTACACATATGGTACTG
I S G K P T G S E D C L Y L N V Y T N D -
TTGAACCCAGACAAAAGGCGTCCGTGTTATGGTTTTTCATCCATGCGCGGAGATTTTATTTT
361 -----+-----+-----+-----+-----+-----+ 420
AACTTGGGTCTGTTTTCCGACAGGACAATACCAAAGTAGGTACCGCCTCTAAAATAAAG
L N P D K R R P V M V F I H G G D F I F -
GGCGAAGCAAAATCGTAACGTGGTTTGGTCCCGACTCTTTATGAAGAAACCGTGGTCTTG
421 -----+-----+-----+-----+-----+-----+ 480
CCGTTTCGTTTAGCATTGACCAACAGGGCTGATGAAATACTTCTTTGGGCACCAAGAC
G E A N R N W F G P D Y F M K K P V V L -

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GTAACCGTGCAATATCGTTTGGGTGTGTTGGGTTTCCTTAGCCTGAAATCGGAAAAATCTC
481 -----+-----+-----+-----+-----+ 540
CATTTGGCACGTTATAGCAAAACCCACACCAAGGAATCGGACITTAGCCTTTATAGAG
V T V Q Y R L G V L G F L S L K S E N L -
AATGTCCTCCCGGCAACGCTGGCCCTCAAGGATCAAGTAATGGCCITGAGATGGGTCAAGAGT
541 -----+-----+-----+-----+-----+ 600
TTACAGGGGCGGTTGGGACCGGAGTTCCTAGTTTCATTACCGGAACCTCTACCCAGTTCTCA
N V P G N A G L K D Q V M A L R W V K S -
AATATTGCCATTTTCGGTGGCGATGTAGACAATATTACCGTCTTCGGCGAAAGTGTGGT
601 -----+-----+-----+-----+-----+ 660
TTATAACGGTAAAGCCACCGCTACATCTGTTAATGGCAGAAAGCCGCTTTCACGACCA
N I A I F G G D V D N I T V F G E S A G -
GGGGCCTCAACCCATTACATGATGATAACCGAACAGACCCGTGGTITATTCCATCGTGGT
661 -----+-----+-----+-----+-----+ 720
CCCCGGAGTTGGGTAAATGACTACTATTGGCTTGTCTGGGCACCAATAAGGTAGCACCA
G A S T H Y M M I T E Q T R G L F H R G -
ATCATGATGTCCGGTAATTCATGTGCTCATGGGCCTCTACAGAAATGCCAAAGTGTGGG
721 -----+-----+-----+-----+-----+ 780
TAGTACTACAGGCCATTAAGGTACACGAGTACCCGGAGATGTCTTACGGTTTCAGCACCG
I M M S G N S M C S W A S T E C Q S R A -
CTCACCATGGCCAAACGTTTGGCTATAAGGGAGAGGACAATGAAAAAGATATCCTGGAA
781 -----+-----+-----+-----+-----+ 840
GAGTGGTACCGGTTTGCAACCGATATCCCTCTCCTGTTACTTTTCTATAGGACCTT
L T M A K R V G Y K G E D N E K D I L E -
TTCTTAATGAAAGCCAATCCCTATGATTTGATCAAGAGGAGGCCACAAGTTTGCACCCC
841 -----+-----+-----+-----+-----+ 900
AAGGATTACTTTTCGGTTAGGGATACTAAACTAGTTTCTCCTCGGTGTTCAAAACTGTGGG
F L M K A N P Y D L I K E E P Q V L T P -
GAAAGAATGCAAAATAAGGTCTATGTTTCTTTTGGACCCACTGTAGAACCATACCAGACA
901 -----+-----+-----+-----+-----+ 960
CTTTCTTACGTTTTATTCCAGTACAAAGGAAACCTGGGTGACATCTGTTATGCTCTGT
E R M Q N K V M F P F G P T V E P Y Q T -
CGCGACTGTGTGGTACCCAAACCAATCAGAGAAATGGTGAAGAGCGCCTGGGGAAATTGG
961 -----+-----+-----+-----+-----+ 1020
CGGCTGACACACCATGGGTTTGGTTAGTCTCTTTACCACTTCTCGCGGACCCCTTTAAGC
A D C V V P K P I R E M V K S A W G N S -

Figure 3 continued

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ATACCCACATTGATAGGCAATACCTCCTACGAAGGTTTGCTTTCAAATCAATTGCCAAA
 1021 -----+-----+-----+
 TATGGGGTGAACATATCCGTTATGGAGGATGCTTCCAAACGAAAGGTTTAGTTAACGGTTT
 I P T L I G N T S Y E G L L S K S I A K -
 CAATATCCGGAGGTTGTAAAGAGTTGGAATCCTGTGTGAATTATGTGCCTTGGGAGTTG
 1081 -----+-----+-----+ 1140
 GTTATAGGCCTCCAACATTTTCTCAACCTTAGGACACACTTAATACACGGAACCTCAAC
 Q Y P E V V K E L E S C V N Y V P W E L -
 GCTGACAGTGAACGAGTGCCCCGAAACCTTGGAGAGGGCTGCCATTGTGAAAAGGCC
 1141 -----+-----+-----+ 1200
 CGACTGTCACTTGGCTACGGGGCCTTTGGGACCTCTCCCGACGTAACACTTTTTCGGG
 A D S E R S A P E T L E R A A I V K K A -
 CATGTGGATGGGAAACACCTACTCTGGATAATTTTATGGAGCTTTGCTCCTATTCTAT
 1201 -----+-----+-----+ 1260
 GTACACCTACCCCTTTGTGGATGAGACCTATTAATAACCTCGAAACGAGGATAAAGATA
 H V D G E T P T L D N F M E L C S Y F Y -
 TTCCTCTTCCCATGCAATCGCTTCTACAATTGCGCTTCAACCACACAGCTGGCACTGCC
 1261 -----+-----+-----+ 1320
 AAGGAGAAGGGGTACGTAGCGAAGGATGTTAACGGCGAAGTTGGTGTGTCGACCGTGAGGG
 F L F P M H R F L Q L R F N H T A G T P -
 ATTTATTGTATCGTTTCGATTTCGATTCGGAAGAAATTATTAACCCCTATCGTATTATG
 1321 -----+-----+-----+ 1380
 TAAATAAACATAGCAAAGCTAAAGCTAAGGCTTCTTTAATAATTGGGGATAGCATAATAC
 I Y L Y R F D F D S E E I I N P Y R I M -
 CGTTTTGGCGTGGCGTTAAAGGTGAAGCCATGCCGATGAGCTAACCTATCTCTTCTGG
 1381 -----+-----+-----+ 1440
 GCAAAACCGGCACCGCAATTCCACATTCCGTACGGCTACTCGATTGGATAGAGAAGACC
 R F G R G V K G V S H A D E L T Y L F W -
 AACATTTTGTGAAACGCCTGCCAAAGGAAAGCCGGAATACAAAACATTGAACGCATG
 1441 -----+-----+-----+ 1500
 TTGTAAACAGCTTTGCGGACGGTTTCCTTTTGGGCGTTATGTTTGGTAACCTGCGTAC
 N I L S K R L P K E S R E Y K T I E R M -
 GTTGGCATTGTGACGGAATTCCGCCACCACCGGCAACCATACAGCAATGATATAGCCGGC
 1501 -----+-----+-----+ 1560
 CAACCGTAAACCTGCCTTAAGCGGTGGTGGCGGTTGGTATGTGCTACTATATAGCGCGG
 V G I W T E F A T T G K P Y S N D I A G -

Figure 3 continued

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ATGGAAAACCTGACCTGGGATCCCATAAAAAATCCGATGATGCTATAAATGTTTAAAT
1561 -----+-----+-----+-----+-----+ 1620
TACCTTTTGGAGTGGACCCTAGGGTATTTTTTAGGCTACTACAGATATTTACAAATTTA
M E N L T W D P I K K S D D V Y K C L N -
ATCGCGGATGAATTGAAAGTTATGGATTTGCCAGAAATGGATAAAATTAACAATGGGCA
1621 -----+-----+-----+-----+-----+ 1680
TAGCCGCTACTTAACTTTCAATACCTAAACGGTCTTTACCTATTTTAATTTGTTACCCGT
I G D E L K V M D L P E M D K I K Q W A -
AGTATATTCGATAAAAAGAAGGAATTGTTT
1681 -----+-----+-----+ 1710
TCATATAAGCTATTTTCTTCCTTAACAAA
S I F D K K K E L F

Figure 3 continued

Figure 4..

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